

## C L A I M S

1. System for back-up of data objects stored on a real smart card comprising:

5 a virtual smart card control component (8) for handling creating of a virtual smart card and for providing the security and the read/write process for the virtual smart card (VSC-2, 4, 6)

10 a smart card manager component (18) for providing a menu controlled graphical user interface allowing user actions for initiating creation of a VSC and back-up of data objects being stored in said real smart into said corresponding area of said virtual smart card,

15 a communication component (12, 14, 20, 22, 26, 28) for transferring said data objects to be backed-up from said real smart card (32) to said virtual smart card (2, 4, 6) by using functionality of said virtual smart card control component (8).

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2. System for secure copy of data objects being stored in a virtual smart card (2, 4, 6) into a real smart card (32) comprising:

a storage media (2, 4, 6) for providing a virtual smart card having data objects to be securely copied into the assigned area of a real smart card (20)

5 a virtual smart card control component (8) for handling creating of a virtual smart card and for providing the security and the read/write process for the virtual smart card (VSC)

10 a communication component (12, 14, 20, 22, 26, 28) for providing access to a real smart card via access to a smart card driver (22) assigned to the smart card reader (20) and a card agent (28) for providing smart card specific commands for writing said data objects to be securely copied from said intermediate buffer (10) into said assigned area of said real  
15 smart card (32)

20 a smart card manager component (18) providing a menu controlled graphical user interface allowing to initiate user actions for creation of a VSC and secure copy of data objects being stored in said virtual smart card into said corresponding area of said real smart card.

25 3. System according to claim 1, wherein said communication component comprising:

5 a smart card API component (12) providing an  
interface to said smart card manger component (18),  
an interface to said virtual control component (8),  
and an interface to a smart card & SC Reader Handler  
component (14) providing an interface to all  
available smart card reader driver(s) (22), wherein  
said smart card & SC Reader Handler (22) has an  
interface to a smart card agency component (26)  
10 providing an interface to all available smart card  
agent(s) (28) providing smart card specific commands.

4. System according to claim 1, wherein said smart card  
API (12), said smart card manager component (18) and  
15 said virtual smart card control component (8) form an  
integral component.

5. Method for back-up of data objects being stored  
on a real smart using a system according to claim 1:

characterized by the steps of:

20 opening and displaying data objects of a real smart  
card to be backed-up via said smart card manager  
graphical user interface

selecting data objects to be backed-up via said smart

card manager graphical user interface

5 automatically creating a virtual smart card (VSC) by  
said smart card control component via said smart card  
manager graphical user interface, wherein said  
created virtual smart card having a defined logical  
file structure being identical with the logical file  
structure of said real smart card in use

10 opening a data object area of said created virtual  
smart card for placing said data objects to be  
backed-up via said smart card manager graphical user  
interface

15 copying data objects to be selected into said area of  
said created virtual smart card via said smart card  
manager graphical user interface

storing said virtual smart card on a secure permanent  
storage media.

6. Method according to claim 5, wherein said step for  
automatically creating of said virtual smart card  
comprises the following steps:

20 automatically creating a defined file structure  
having defined areas for placing data objects by a

virtual smart card control program

5 automatically assigning a password and an unique  
identifier to said defined file structure created and  
storing both in the respective area of said defined  
file structure by said virtual smart card control  
program

electronically storing said defined file structure  
including said data objects on a storage media  
(virtual smart card.

10 7. Method according to claim 6, wherein said defined  
file structure of said virtual smart card comprising:

a public area in which public data objects having no  
access conditions are placed

15 a private area in which private data objects being  
encrypted are placed

a secret key area in which key data objects being  
encrypted are placed

a password area in which a password being encrypted  
is placed

an unique identifier area in which an unique identifier for identifying the VSC is placed.

5           8.       Method according to claim 7, wherein said defined  
file structure of said virtual smart card is a  
dedicated file structure containing elementary files  
for defining the areas in which said data objects are  
to be placed.

10           9.       Method according to claim 7, wherein user actions via  
said menu controlled graphical user interface with  
respect to the private areas of said virtual smart  
card require the input of a password.

15           10.       Method according to claim 5, wherein said opening,  
copying, and storing steps are accomplished using a  
respective functionality provided by the virtual  
smart card control program.

            11.       Method according to claim 5, wherein said virtual  
smart card is created on a server system and is  
provided to a client system via a secure channel.

20           12.       A computer program product stored on a computer  
usable medium comprising computer readable program  
means for causing a computer to perform the method of  
anyone of the claims 5 to 11 when said program

product is executed on said computer.

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